

CLAIMS:

Claims 108-109, 112-113, 115-130 and 132. (Canceled)

141. (Newly Added) A method of promoting healing or regeneration of damaged eye epithelium or cornea or of the anterior segment of the eye, comprising administering or applying to a subject afflicted with a disorder or condition associated with eye epithelium, cornea or anterior segment damage comprising a corneal epithelial defect, membrane rupture, corneal damage associated with eye surgery, eye injury associated with aging, physical, chemical, radiation or medication damage, chronic corneal edema, or pain thereof, a therapeutic amount of an agent(s) comprising a high density lipoprotein (HDL), and/or a non-cholesterol lipid component(s) thereof able to reconstitute HDL.

142. (Newly Added) The method of claim 141, wherein the therapeutic amount of the agent(s) comprise(s) an eye epithelium regenerative amount thereof.

143. (Newly Added) The method of claim 141, wherein the agent comprises HDL, a sphingolipid(s), an apolipoprotein(s), a non-cholesterol lipid comprising a phospholipid(s) and/or another HDL lipid component(s), or a mixture(s) thereof.

144. (Newly Added) The method of claim 141, wherein the eye surgery associated with corneal damage comprises laser, photorefractive keratectomy, radial keratotomy or pain thereof.

145. (Newly Added) The method of claim 141, wherein the corneal damage comprises epithelium or stroma damage, or pain thereof.

146. (Newly Added) The method of claim 141, wherein the radiation associated with eye injury comprises ultraviolet radiation or pain thereof.

147. (Newly Added) The method of claim 141, wherein the radiation associated with eye injury comprises sunlight or pain thereof.

148. (Newly Added) The method of claim 141, wherein the chronic corneal edema is associated with epithelium erosion or pain thereof.

149. (Newly Added) The method of claim 141, wherein the chronic corneal edema is associated with recurrent epithelium erosion or pain thereof.

150. (Newly Added) The method of claim 141, wherein epithelial defect comprises a spontaneous peeling of the epithelium or pain thereof.

151. (Newly Added) The method of claim 141, wherein the eye injury is associated with burns or pain thereof.

152. (Newly Added) The method of claim 141, wherein the disorder or condition comprises spontaneous peeling or a systemic disorder or condition or pain thereof.

153. (Newly Added) The method of claim 152, wherein the systemic disorder or condition comprises Sjogren syndrome, Steven-Johnson syndrome, Cicatricial pemphingoid syndrome, impaired tear film formation, those following epithelial damage associated with radial keratotomy or pain thereof.

154. (Newly Added) The method of claim 141, wherein the promotion of healing or regeneration of damaged eye epithelium comprises symptom alleviation, or curing or prevention thereof.

155. (Newly Added) The method of claim 141, wherein the eye epithelium comprises corneal and/or conjunctival epithelium.

156. (Newly Added) The method of claim 155, wherein the corneal or conjunctival epithelium comprises epithelial cells or glands.

157. (Newly Added) The method of claim 141, wherein the disorder or condition is associated with physical damage, chemical damage, a slow regeneration rate of epithelial cells, diminished conjunctival glandular secretion or pain thereof.

158. (Newly Added) The method of claim 141, wherein the disorder or condition comprises a disease or defect associated with systemic or topical medication(s) or pain thereof.

159. (Newly Added) The method of claim 141, wherein the agent further comprises albumin or an ophthalmic agent(s).

160. (Newly Added) The method of claim 159, wherein the ophthalmic agent(s) comprise(s) one or more of an EGF factor(s), an attachment factor(s), an extracellular matrix component(s) or an UV light protecting agent(s).

161. (Newly Added) The method of claim 160, wherein
the EGF factor(s) comprise(s) keratinocyte growth factor(s);
the attachment factor(s) comprise(s) laminin or fibronectin;
the extracellular matrix component(s) comprise(s) collagen or a heparin sulfate proteoglycan(s); and/or
the UV light protecting agent(s) comprise(s) oxybenzone.

162. (Newly Added) The method of claim 141, wherein the agent(s) is provided as a pharmaceutical composition further comprising an ophthalmically acceptable carrier(s).

163. (Newly Added) The method of claim 162, wherein the composition is provided in the form of eye drops or a salve.

164. (Newly Added) The method of claim 162, wherein the composition comprises an emulsion, micelles or liposomes.

165. (Newly Added) The method of claim 162, wherein the composition comprises 0.1 to 20% agent(s).

166. (Newly Added) The method of claim 162, wherein the composition comprises 0.2 to 10% agent(s).

167. (Newly Added) The method of claim 162, wherein the composition comprises an hyperosmotic formulation, and may further comprise a salt(s).

168. (Newly Added) The method of claim 141, wherein at least one agent(s) is associated with a net cellular efflux of cholesterol.

169. (Newly Added) The method of claim 141, wherein the agent(s) is applied to storing and/or maintaining an isolated cornea(s).

170. (Newly Added) The method of claim 141, wherein the disorder or condition comprises at least one of mechanical abrasion of the cornea, corneal epithelial defects created by contact lens wearing, corneal epithelial defects created by spontaneous peeling of the epithelium, corneal damage following photorefractive keratectomy, injuries caused by chemical substances, injuries caused by U.V. light exposure, corneal epithelium damage caused by medication, chronic edema of cornea with recurrent erosion of epithelium, a condition following damage of epithelia due to radial keratotomy or pain thereof.

171. (Newly Added) The method of claim 141, wherein the anterior segment of the eye comprises at least one of corneal epithelium or stromal conjunctiva.

172. (Newly Added) The method of claim 157, wherein the slow rate of regeneration is associated with at least one of old age or administration of anti-proliferative substances.

173. (Newly Added) The method of claim 141, wherein the HDL comprises at least one of human HDL, bovine HDL or reconstituted HDL comprising phospholipids and/or sphingolipids and at least one apolipoprotein.

174. (Newly Added) The method of claim 143, wherein the phospholipids(s) comprise(s) at least one of phosphatidyl choline, phosphatidylethanolamine, phosphatidylserine or phosphatidylinositol.

175. (Newly Added) The method of claim 143, wherein the sphingolipids comprise at least one sphingomyelin(s).

176. (Newly Added) The method of claim 141, wherein the agent comprises HDL, and a phospholipid(s), sphingolipid(s) or a lipid component(s) of HDL other than cholesterol and a cholesteryl ester(s).

177. (Newly Added) The method of claim 141, wherein the non-cholesterol lipid component(s) comprises a triglyceride(s) and/or glycerol.

178. (Newly Added) The method of claim 141, wherein the agent further comprises an apolipoprotein(s).

179. (Newly Added) The method of claim 178, wherein the apolipoprotein(s) comprises at least one of apolipoprotein A-I, apolipoprotein II or apolipoprotein E, apolipoprotein IV or a mixture or combination thereof.

180. (Newly Added) The method of claim 141, wherein the disorder or condition comprises at least one of dry eye, tear film dysfunction caused by medication, decrease in secretion from a gland(s) located in the conjunctiva or pain thereof.

181. (Newly Added) The method of claim 141, wherein the agent comprises at least one of Lipofundin ® or Intralipid®.

182. (Newly Added) The method of claim 162, wherein the composition further comprises albumin, a growth factor(s), an attachment factor(s) or an extracellular component(s).

183. (Newly Added) The method of claim 182, wherein
the growth factor comprises at least one of keratinocyte growth factor (KGF/FGF7), epidermal growth factor (EGF) or an FGF(s);

the attachment factor comprises at least one of laminin or fibronectin; and/or

the extracellular matrix component comprises at least one of collagen or an heparan sulfate proteoglycan(s).